Rejections under 35 U.S.C. § 103

The Examiner has rejected claims 1-23 under 35 U.S.C. § 103(a) as being unpatentable over "The Java Language Environment" by Gosling et al. in view of U.S. Patent No. 5,187,787 issued to Skeen et al.

Independent claim 1 recites a framework for associating data, which is associated with an application, with a command object that is arranged to operate on the data. The framework includes a data handler mechanism that interfaces with the application, and a data retriever mechanism that communicates with the data handler to obtain data and to pass the data to the data handler mechanism. The framework also includes a mapping mechanism which obtains the command object based substantially on the data.

A framework that obtains a command object based on data, rather than based on a user selection or an application that will use the command object, effectively enables the application to be "blind" to the process of associating data with an appropriate command object (Specification, on page 7, at lines 16-23). Hence, command object may remain separate from applications. By maintaining command objects independently, data types and command types may be readily modified, created, and deleted (Specification, on page 7, at lines 25-28). Additionally, command objects may be used by multiple applications. As such, the efficiency with which command objects may be implemented and used is increased.

The Examiner has asserted that Gosling et al. in view of Skeen et al. teaches the framework required by claim 1. The Examiner has acknowledged that Gosling et al. does not teach of a data handler mechanism which is in communication with an application, a data retriever mechanism, and a mapping mechanism. However, the Examiner has stated that Skeen et al. teaches of such a data handler mechanism. The Applicants respectfully submit that contrary to the Examiner's statements, Skeen et al. does not teach of a data

handler mechanism which is in communication with an application, a data retriever mechanism, and a mapping mechanism. The Examiner has argued that a communication component as taught by Skeen et al. is equivalent to a data handler mechanism, and that a subject mapper as taught by Skeen et al. is equivalent to a mapping mechanism. It is respectfully submitted that Skeen et al. teaches that a subject mapper is part of a communication component (*e.g.*, Figure 14 of Skeen et al. and associated text). A subject mapper that is an integral component of a communication component is not equivalent to a mapping mechanism that is in communication with a data handler mechanism. Maintaining a data handler mechanism separately from a mapping mechanism enables instances of a data handler to be created substantially independently from the mapping mechanism. Further, the mapping mechanism of claim 1 is not required to be directly in communication with a data retriever mechanism, as is effectively required by Skeen et al. Hence, claim 1 is believed to be allowable for at least this reason.

Further, the Examiner has stated that Skeen et al. teaches of a mapping mechanism that is arranged to obtain a command object based on data, and is in communication with a data handler mechanism. In the Final Office Action dated January 5, 2000, the Examiner has equated the mapping mechanism of claim 1 to a subject mapper as taught by Skeen et al. (*e.g.*, subject mapper 180 of Figure 14 of Skeen et al.). It is respectfully submitted that the subject mapper of Skeen et al. is not arranged to obtain a command object based on data obtained by a data retriever and passed to a data handler mechanism. Instead, the subject mapper of Skeen et al. obtains a request for information directly from an application (Skeen et al., column 18, lines 48-51).

In addition, Skeen et al. specifically teaches that a subject mapper is used to determine the network address for services which provide information on various subjects and to invoke appropriate service discipline routines to establish communications with those services (Skeen et al., column 18, lines 60-64). The Examiner has argued that a service discipline routine is equivalent to a command object. A command object, as required by claim 1, is arranged to operate on data. A service discipline routine, on the

other hand, examines service records (Skeen et al., column 19, lines 62-65) and is arranged to establish communications with services (Skeen et al., column 18, lines 60-64). It is respectfully submitted that a routine that is arranged to establish communications with a service identified using service records does not teach or reasonably suggest a command object that is arranged to operate on data. Hence, the mapping mechanism of claim 1 is not equivalent to a subject mapper of Skeen et al, and claim 1 is believed to be allowable over the art of record for at least this additional reason.

Claims 2-8, 21, and 22 each depend either directly or indirectly from independent claim 1, and are, therefore, each believed to be allowable over the art of record for at least the reasons set forth with respect to claim 1. Each of these dependent claims recites additional limitations which, when considered in view of independent claim 1, further distinguish the claimed invention over the art of record.

Independent claim 9 recites a method for associating data with a command object in response to a request from an application. The method includes accessing data through an interface, accessing a mapping mechanism that is accessed by the interface and locates a command object, and obtaining the appropriate command object for the data. The interface binds the command object to the data, then returns the command object to the application. Both the interface and the mapping mechanism are independent from the application, *e.g.*, the interface and the mapping mechanism are not a part of the application. Though independent from the application, the interface is in communication with the application.

An interface which is separate from an application and accesses data, in addition to accessing a mapping mechanism to locate a suitable command object for the data, allows the application to be indirectly associated with command objects. Maintaining command objects independently from applications enables command objects, as well as data types, to be modified, created, and deleted without affecting the application

(Specification, on page 7, at lines 15-18). Maintaining the mapping mechanism separately from the interface such that the mapping mechanism may be accessed by the interface further enables command objects to be created independently from the interface.

In his rejection of claim 9, the Examiner has effectively stated that an interface for accessing data is a communication component as shown in Figure 14 of Skeen et al. The Examiner has further stated that the subject mapper as shown in Figure 14 of Skeen et al. is equivalent to the mapping mechanism of claim 9. It is respectfully submitted that the mapping mechanism of claim 9 is accessed by an interface that is in communication with an application. Skeen et al., however, teaches that a subject mapper is part of a communications component (Skeen et al., column 9, lines 34-40). In addition, claim 9 also requires that a mapping mechanism obtains a command object and passes the obtained command object to the interface. The subject mapper of Skeen et al. is not accessed by the communications component since the subject mapper is part of the communications component. Further, the subject mapper does not pass anything to the communications component or module. Accordingly, claim 9 is believed to be allowable over the art of record for at least these reasons.

In addition, none of the art of record teaches or reasonably suggests returning a command object to an application through an interface or otherwise. The Examiner has stated that he believes that the command object of claim 9 is equivalent to a service discipline as disclosed by Skeen et al. It is respectfully submitted that, for purposes of illustration, even if a service discipline is equivalent to a command object (shich the Applicants do not believe to be the case), a service discipline is not returned to an application, through an interface or otherwise. Specifically, Skeen et al. teaches only of sending items of information pertaining to a requested subject to a service discipline (Skeen et al., column 20, lines 13-19). Such information is not passed to an application and, further, a service discipline is not returned to an application. Therefore, claim 9 is believed to be allowable for at least this reason as well.

Claims 10-15 each depend either directly or indirectly from independent claim 9, and are, therefore, each believed to be allowable over the art of record for at least the reasons set forth with respect to claim 9. Each of these dependent claims recites additional limitations which, when considered in view of independent claim 9, further distinguish the claimed invention over the art of record.

Independent claim 16 recites a computer program product which performs the steps of claim 9, and is therefore believed to be allowable over the art of record for at least the reasons set forth above with respect to claim 9. As claims 17-20 each depend from claim 16, claims 17-20 are each also believed to be allowable for at least these reasons as well.

Independent claim 23 requires that a computer-implemented framework for associating data with a command object includes a data handler mechanism which is arranged to interface with a plurality of applications. The framework also includes a data retriever mechanism which communicates with the data handler mechanism, and a mapping mechanism that is associated with the plurality of applications. The mapping mechanism is arranged to obtain the command object without directly involving a selected application.

In his rejection of claim 23, the Examiner has argued that Skeen et al. teaches of a data handler mechanism that interfaces with a plurality of applications. While the Applicants agree that Skeen et al. teaches of more than one application, Skeen also teaches that each application has its own communications interfaces (Skeen et al., column 7, lines 16-60). As Skeen et al. teaches that each application has a separate communications interface, it is respectfully submitted that Skeen et al. does not teach or reasonably suggest a single communications interface which interfaces with a plurality of applications. Hence, claim 23 is believed to be allowable over the art of record for at least this reason.

Further, claim 23 requires that a mapping mechanism is in communication with the data handler mechanism, and is associated with a plurality of applications. As discussed above with respect to claim 1, Skeen et al. does not teach of a mapping mechanism which is in communication with a data handler mechanism. Skeen et al. also does not teach of a mapping mechanism that is associated with a plurality of applications. Instead, Skeen et al. teaches of separate communications interface modules, which may include a subject mapper, and are each associated with a single application. Therefore, since claim 23 specifically requires that a mapping mechanism is associated with a plurality of applications, claim 23 is believed to be allowable for at least this reason as well.

In view of the above, Applicants believe that all pending claims are allowable and respectfully request a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

If any fees are due in connection with the filing of this amendment, the Commissioner is authorized to charge such fees to Deposit Account 50-0388 (Order No. SUN1P123). A duplicate copy of the transmittal is enclosed for this purpose.

Respectfully submitted,
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